CLAIMS

What is claimed is:

1.   A computer-based method of synchronizing a realization of a media stream having a first representation synchronized with said realization, and at least one second representation, said method comprising:

determining structure information for said first representation and said at least one second representation;

determining structure association information between said first representation and said at least one second representation; and

synchronizing said at least one second representation with said first synchronized representation and said realization using said structure association information.

2.   The method according to claim 1, said step of determining structure information further comprising:

analyzing said structure information of said first and said at least one second representation, and providing a stream of tree locators.

3.   The method according to claim 2, further comprising:

aligning said determined structure information of said first representation and said at least one second representation.

4.   The method according to claim 3, wherein said realization comprises at least one version of content, said method further comprising:

aligning said at least one version of content with said first representation to produce a web of relations between said at least one version of content and said first representation.

1   5.   The method according to claim 4, wherein said aligning said at least one version

2   of content with said first representation produces a web of relations between a

3   structural view of said at least one version of content and said first representation.

1   6.   The method according to claim 3, further comprising:

2   aligning an audio stream specified by said media stream with an audio structure

3   corresponding to said audio stream.

1   7.   The method according to claim 3, further comprising:

  aligning a text stream specified by said media stream with a text structure

  corresponding to said text stream.

2   8.   A system for synchronizing a realization of a media stream having a first

  representation synchronized with said realization, and at least one second

3   representation, said method comprising:

4   a first structurer configured to determine structure information for said first

  representation;

5   at least a second structurer configured to determine structure information for said

6   at least one second representation; and

7   a first aligner configured to align said structure information for said first

8   representation and said at least one second representation.

1   9.   The system according to claim 8, further comprising:

2   at least one renderer configured to render said at least one second

3   representation, after being synchronized, in a form suitable for displaying as an

4   overlayed subtitle.

1 10. The system according to claim 9, wherein said realization specifies a media
2 stream, said system further comprising:
3 a tree aligner configured to determine a tree structure for said media stream.

1 11. The system according to claim 10, further comprising:
2 means for detecting speech and non-speech boundaries.

1 12. The system according to claim 10, further comprising:
means for detecting transitions and speaker changes.

13. A machine-readable storage, having stored thereon a computer program having
a plurality of code sections executable by a machine for causing the machine to
perform the steps of:
4 determining structure information for a first representation being synchronized to
6 a corresponding media stream and at least one second representation;
6 determining structure association information between said first representation
and said at least one second representation; and
8 synchronizing said at least one second representation with said first
9 synchronized representation and said realization using said structure association
10 information.

1 14. The machine-readable storage according to claim 13, said step of determining
2 structure information further comprising:
3 analyzing said structure information of said first and said at least one second
4 representation, and providing a stream of tree locators.

1 15. The machine-readable storage according to claim 14, further comprising:
2 aligning said determined structure information of said first representation and
3 said at least one second representation.

1   16.   The machine-readable storage according to claim 15, wherein said realization

2   comprises at least one version of content, said machine-readable storage further

3   comprising:

4   aligning said at least one version of content with said first representation to

5   produce a web of relations between said at least one version of content and said first

6   representation.

17.   The machine-readable storage according to claim 15, wherein said aligning said

at least one version of content with said first representation produces a web of relations

between a structural view of said at least one version of content and said first

representation.

1   18.   The machine-readable storage according to claim 15, further comprising:

2   aligning an audio stream specified by said media stream with an audio structure

3   corresponding to said audio stream.

1   19.   The machine-readable storage according to claim 15, further comprising:

2   aligning a text stream specified by said media stream with a text structure

3   corresponding to said text stream.